

WHAT IS CLAIMED IS:

1. A liquid crystal display device having an array of pixels comprising;

a first substrate;

a second substrate;

a liquid crystal layer between the first and second substrate;

a plurality of ribs positioned over the first substrate, the plurality of ribs being spaced from each other; and

a pixel electrode having a plurality of slits, each one of the plurality of slits being positioned between two of the ribs.
2. The liquid crystal display device according the claim 1, further comprising a side electrode between two of the slits.
3. The liquid crystal display device according the claim 2, wherein the side electrode is positioned below the pixel electrode and above the second substrate.
4. The liquid crystal display device according the claim 1, further comprising two side electrodes, each side electrode being positioned between two of the slits.

5. The liquid crystal display device according to claim 1, wherein the plurality of slits includes three slits.
6. The liquid crystal display device according to claim 5, wherein the three slits form a zig-zag shape.
7. The liquid crystal display device according to claim 1, wherein a first pixel in the array of pixels has three sections, each section having a corresponding slit and ribs.
8. The liquid crystal display device according to claim 7, wherein two contiguous sections within the first pixel have corresponding slits formed in a direction substantially symmetrical to each other.
9. The liquid crystal display device according to claim 7, wherein two ribs sandwich each slit in each section.
10. The liquid crystal display device according to claim 9, wherein the two ribs are

positioned substantially symmetrical to each other about each slit in each section.

11. The liquid crystal display device according to claim 9, wherein at least one of the two ribs has end portions bending towards the slit.

12. The liquid crystal display device according to claim 11, wherein an end portion of one of the two ribs of at least one of the sections is configured to eliminate shadow.

13. The liquid crystal display device according to claim 11, wherein an end portion of one of the two of the sections is configured to eliminate shadow.

14. The liquid crystal display device according to claim 7, wherein two contiguous pixels in the array of pixels each has three sections, each section having a corresponding slit and ribs, the slit of each section of the two contiguous pixels being substantially symmetrical.

15. The liquid crystal display device according to claim 14, wherein the ribs of each section are connected to each of the ribs of the other sections.

16. The liquid crystal display device according to claim 14, further comprising a side electrode at least one section of each pixel.
17. The liquid crystal display device according to claim 14, further comprising a side electrode at each boundary between the sections.
18. The liquid crystal display device according to claim 17, wherein the side electrode is contiguous from one section boundary of one pixel to another section boundary of another pixel.
19. The liquid crystal display device according to claim 1, further comprising a light shielding layer and a color filter layer between the first substrate and the ribs.
20. The liquid crystal display device according to claim 1, wherein each of the pixels is divided into three sections to form a multi-domain pixel.
21. The liquid crystal display device according to claim 7, wherein each section has a plurality of miniature slits adjacent a boundary between two sections.

22. The liquid crystal display device according to claim 21, wherein the plurality of miniature slits are configured to eliminate shadow.

23. The liquid crystal display device according to claim 14, wherein the ribs of two contiguous pixels form a diamond shape.

24. The liquid crystal display device according to claim 23, further comprising a plurality of miniature ribs within the diamond shape.

25. A liquid crystal display device having an array of pixels comprising:

a first substrate;

a second substrate;

a liquid crystal layer between the first and second substrate;

a plurality of ribs positioned over the first substrate, the plurality of ribs being a zig-zag shape; and

a pixel electrode having a plurality of slits, the slits being patterned.

26. The device according to claim 25, wherein each of the ribs has one or more projections.

27. The device according to claim 26, wherein the projection is configured to eliminate shadow.

28. The device according to claim 1, wherein the ribs comprise a dielectric material.

29. The device according to claim 25, wherein the ribs comprise a dielectric material.